

Rural Alternatives Project: *Cultural Skills & Community Woodlands*



Case study no. 3: Birch syrup production in Culag Woods



idea, they requested assistance. The Culag RAP officer worked with them for over a year developing the idea.

When the non-timber forest products (NTFP)-focused Rural Alternatives Project (RAP) was set up in Culag Woods, it advertised locally that the project would support small-scale NTFP enterprises, offering support through training, business planning and marketing. One community member had made birch syrup from birch sap for home use and to give to friends for many years. They knew there was an established industry in Alaska making and selling birch syrup and they thought it might be possible to start a business here in Scotland. When they realised that the NTFP project could support them in developing their

Birch syrup

Birch syrup is made from the sap of birch trees. It is similar to maple syrup in that sap is tapped from a tree and boiled down to concentrate the sugar. Nothing is added and only water is removed. Because birch sap contains about 1% sugar (mainly fructose and glucose), it takes an average of 100 gallons of sap to make 1 gallon of birch syrup. Maple sap has a higher sugar content (mainly sucrose), so it requires 40 gallons of sap to make 1 gallon of syrup. This makes birch syrup almost five times as expensive to make as maple syrup, but its flavour (described as light caramel) is distinctive and marketable, as the Alaskan producers have demonstrated. Birch syrup is high in vitamins and minerals, including vitamin C, potassium, manganese, thiamin and calcium. Birch syrup ranges in colour from light amber to dark reddish brown. Generally the earlier in the season the sap is drawn the lighter the syrup. Early season syrup is subtle in flavour and is used to accompany pancakes, as a glaze for meats and fish, or drizzled over ice cream. The darker syrup from later in the season is more full bodied and is used as a spice to flavour foods, both savoury and sweet.

The season for tapping birch trees is when the sap rises in late March/early April. Trees are tapped for two to three weeks, until the trees bud. Tapping the trees does not injure them as it takes only 10-15% of the total sap production of the tree. Only trees over 220 mm in diameter are tapped. There is a limit of one tap per tree and each tree is given a two-year rest between tappings. This means production is very intensive for a short period of time each year.



Tapping a birch tree

The process (adapted for home use)

1. Get the landowner's permission to tap the trees.
2. Drill a 40-60 mm hole with an 8-12 mm sterile drill bit at a slight upward angle.
3. Insert one end of a length of sterile 'food grade' plastic tubing into the hole (the same diameter as the hole) and put the other end into a sterile 'food grade' plastic container (a clean 2 litre plastic milk carton is ideal).
4. Collect sap daily.
5. Only tap trees over 220 mm in diameter, one tap per tree. Tap trees on a three-year rotation.
6. Once tapping is complete, spray each hole with clean water and insert a clean cork.
7. As soon as the sap is collected boil it to remove the water. Birch sugars scorch easily so transfer to a bain-marie for the final bit.
8. Bottle the syrup in sterile food grade bottles and label.
9. It has a shelf life of over 2 years.

The business

The business planning started in September 2006 with research into birch syrup production and markets. This was very much focused on Alaska as it is a well-established industry there – and they speak English! Over the next few months the project looked at setting up a similar business here in Scotland. It looked at: legislation in the food processing industry; suitable premises; food hygiene and shelf life; processing and equipment; packaging and labelling; marketing (including primary and secondary market research); developing a pricing policy; business start up funding; and writing a business plan.

In March 2007 the sap began to flow early due to the mild weather. Sap was collected from trees growing on local community-owned land and processed in a shed adapted to suit production following the advice received. To keep costs to a minimum the sap was processed in a large drum over a wood fire. When the syrup was made it was stored in plastic containers.



Logo for birch syrup

Later in March, once the sap had stopped running the project focused on further primary market research and the design of labels and bottles. Because of the high cost of production and from the information gained in our research we knew that our markets were the luxury food market and tourist gift market. We decided to focus on the tourist market as it is more accessible and our initial stock was small. The syrup made in this first year was to be used to test the market. Sample bottles with labels were taken round potential customers in the North of Scotland, including food and tourist gift shops and hotels. The feedback to the product, label, bottle size and price was positive. Then disaster struck; the whole stock started to ferment! The most likely reason was narrowed down to cross contamination by honey fungus getting into the syrup. There was a problem with the processing, but we knew without investing in equipment that this could happen. With business start-up assistance, it is hoped to purchase equipment to process the sap.

The future and lessons learned

- Because of the short season for tapping trees and processing the syrup this business will always be seasonal. In Alaska they have extended their season by producing other fruit syrups; this could be considered here.
- Lack of understanding of birch syrup as a product means it is more expensive to market, but it also means there isn't competition!
- Lack of experience can lead to costly mistakes, as we found, but at least we have the information and support from Alaskan producers to avoid the worst mistakes.
- Financing the business will always be a problem, but this is the case with most small businesses.
- The high cost of production means birch syrup is a luxury product, but so long as it can be sold for a profit, is this a problem?

RESOURCES – SOURCES OF HELP AND ADVICE

- HIE Caithness and Sutherland supported this project by funding a consultant, Hazel Gordon of FINDS (Food Industry Development Services)
- Daniel and Susan Humphrey of BirchBoy Syrups, Alaska
- North West Sutherland Food Links
- Assynt Photographics (label design)
- The Scottish Agricultural College (food marketing)

For further information about the Rural Alternatives Project, visit:
www.reforestingscotland.org/projects/rural_alternatives.php

For general information about non-timber forest products, visit: www.forestharvest.org.uk

Written by Hilary MacDonald, RAP Local Coordinator for the Culag Community Woodland group